

21. The system of claim 18, wherein said first diameter is sized to receive a bone screw therethrough and is at least 5.5 millimeters.
22. A minimally invasive surgical method for fixing adjacent vertebrae, comprising:
sequentially dilating skin and tissue to provide an access portal to a disc space between
the adjacent vertebrae; and
fusing the adjacent vertebrae with material introduced through the sequentially dilated
portal.
23. The method of claim 22, further comprising performing a discectomy through the
access portal before fusing the adjacent vertebrae.
24. The method of claim 22, further comprising securing fixation instrumentation to
the adjacent vertebrae.
25. The method of claim 22, wherein the fixation instrumentation is secured to the
pedicles of the adjacent vertebrae.
26. The method of claim 22, further comprising:
sequentially dilating skin and tissue to provide a second access portal to a disc space
between the adjacent vertebrae; and
visualizing the disc space through the second access portal.

27. The method of claim 22, wherein the material includes bone graft material.

28. The method of claim 27, further comprising:

sequentially dilating skin and tissue to provide a second access portal to a disc space between the adjacent vertebrae; and
visualizing the delivery of bone graft material to the disc space through the access portal with a viewing instrument in the second access portal.

29. The method of claim 22, wherein sequentially dilating the skin and tissue includes placing at least three dilator tubes of increasing inner bore diameter one over the other and withdrawing the inner dilator tubes to provide the access portal to the disc space through the last inserted dilator tube.

30. A minimally invasive surgical system for fusing adjacent vertebrae, comprising:
at least three tissue dilators each including a bore therethrough, said bores being of increasing diameter wherein said at least three tissue dilators are positionable one over the other to sequentially dilate tissue to provide access through tissue to at least one of the adjacent vertebrae;

at least one bone screw engageable to each of the adjacent vertebrae; and
an elongated fixation element extendable between the adjacent vertebrae when implanted and engageable to each bone screw engaged to the adjacent vertebrae.